Pest Update (July 4-11, 2012)

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Note: samples containing living tissue may only be accepted from South Dakota. Please do not send samples of dying plants or insects from other states. If you live outside of South Dakota and have a question, instead please send a digital picture of the pest or problem. **Walnut samples may not be sent in from any location – please provide a picture!**

Available on the net at:
http://sdda.sd.gov/Forestry/Educational-Information/PestAlert-Archives.aspx

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Plant development

The smoketrees (*Cotinus*) are in full bloom in Brookings, a little ahead of schedule. This is one of our few summer-blooming shrubs and the appearance of the "smoky" flowers never fails to generate some calls from folks wondering what the name of the plant is.

Current concerns

The "growing" story is the wide-spread drought that is intensifying across much of South Dakota. While it was a nice winter for people, relatively warm and dry, it was tough on trees and most came into spring already under considerable moisture stress. The dry spring and now a hot, dry summer has turned the moderate moisture stress to severe for many trees and shrubs.

The most common symptoms at this time for moisture stress are leaves that are turning a lighter green than is typical for the species. Affected leaves also are showing brown and crisp margins and often the browning is occurring between the veins. Some trees in the southeast are already having the leaves curl and fall, a symptom of severe stress. Eventually trees showing severe moisture stress will begin to dieback.

Evergreen foliage on drought-stressed trees, particularly seedlings, is turning yellow to almost purple at the tips of the needles. Some of the older needles on drought-stressed trees, needles that formed three to five years ago, are beginning to drop prematurely.

There is not much that can be done at this time other than water. This is particularly important for new planting, whether they are seedlings in a new windbreak or a tree just planted in a yard. A seedling is going to need between a pint and quart of water per day while a newly planted tree will need about 2 to 3 gallons per day at this time. Most young tree belts are probably not receiving anywhere close to this amount and I suspect there will be a lot of replanting next spring.

Established trees will not need daily watering but still require weekly watering to survive this dry, hot summer. A 2-inch diameter tree (measured at 6-inches above the ground) should be receiving about 20 gallons of water a week and this is best applied slowly with a soaker hose placed near the tree. Tree roots typically extend out as far as the tree is tall but the critical watering zone is a

distance out about 2/3's the height. As an example, if the tree is about 24 feet tall, the watering should occur within 16 feet of the trunk.

Mountain pine beetles are beginning to fly in the Black Hills. The pioneer beetles, those beetles that begin flying ahead of the main flight have been out for almost a week now so people should start to notice fresh pitch masses along the trunks of pines. These pitch masses are evidence of new attacks by the beetle as they attempt to burrow their way into a tree. The emergence and flight of the beetle is expected to peak before Rally Week (beetles and biker apparently go together) and then decline with sporadic emergence and flights continuing into September. This means the end of the spraying season as our sprays to protect pines from mountain pine beetle only work to kill the beetles as they attack. Once the beetle is in the tree the insecticides do not work. Now we can only wait to see what is attacked.

E-samples

Ash rust is still showing up around the state. I received this picture of the gall on the petiole that is produced by the pathogen. We did not see a lot of the disease this year, most likely due to the dry conditions, but samples and pictures of infected leaves still keep coming into the office. There is nothing that can be done to treat the disease at this time of year. The disease is managed by fungicide applications made as the leaves are beginning to open – an event that occurred several months ago. Fortunately the disease usually just results in disfigured leaves that drop prematurely and is not a serious threat to the tree's health.

Cedar-quince rust is appearing in eastern South Dakota. Rick Mayko, a forester with the South Dakota Department of Agriculture, took this picture of an infected hawthorn fruit. Despite the name "quince" cedar-quince rust has a wide host range and the host can be quince, serviceberry, hawthorn or even mountainash. The alternate host is "cedar"

but not the true cedars (*Cypress*) but junipers (*Juniperus*). The spores are released from infected junipers in April and May and these can infect hawthorns, usually either the twigs or the fruit and by mid-summer the diseased fruit will look like a pin cushion and be covered with these pinkish aecia that will be releasing spores to infect the junipers this fall.

Samples received

Beadle County **Why did this row of eastern redcedars die? It was the only row to show high mortality.**

The seedling sample submitted was infected with juniper twig blight, caused by the fungi *Phomopsis juniperovora*. This is a common disease of junipers in tree belts and is a frequent item in the Update each late spring and early summer. I do not see too many samples from seedlings but the disease does occur on even young seedlings. The control time is early May through June and involves repeated applications of a fungicide. Obviously this time period has passed and nothing can be done to save these trees.

Brule County **What is on this chokecherry branch?**

This is the work of the uglynest caterpillar (*Archips cerasivorana*). A favorite host is cherry and it constructs one of the densest nests of all the spring web-forming caterpillars. The nest was filled with pupa cases; many now open as the adults are beginning to emerge to lay eggs. Most of the pesticides labeled for defoliating caterpillars will be effective on this insect and the treatment is best applied when the caterpillars are first spotted in the spring.

Douglas County **What is wrong with this Autumn Blaze maple and the Redmond linden?**

The linden foliage is showing symptoms of drought stress (these trees are not very fond of hot, dry weather) so watering is the only remedy. The Autumn Blaze maple appears to have suffered from that winter desiccation injury that was so common on maples and birch this last spring. Some trees are recovering but may have considerable dieback as well as stunted leaves and are probably not going to survive.

Roberts County **What is the tree and what is wrong with it?**

This is a bur oak (*Quercus macrocarpa*) and the most common reason for the distorted leaves at this time of year is herbicide drift. The stretching or drawstring effect to the leaves is a typical symptom of a growth regulator herbicide such as 2,4-D.

Walworth County **What are these galls on the maple leaves?**

This is the maple bladder gall caused by a small mite (not an insect). The galls can cover the foliage of silver maples but surprisingly result in no harm to the tree other than its appearance. There is no effective control for the preventing these galls from occurring.

Walworth County **These galls are appearing on the hackberry and one of the Japanese elms has died.**

The galls on the hackberry are due to the hackberry nipplegall maker, a small psyllid (an insect) that looks like a miniature cicada. The insect overwinters on the bark and then moves to the leaves to lay eggs. After the eggs hatch the nymphs feed on the leaves and these galls form around them. The galls are unsightly and often result in some of the leaves falling prematurely but they do not really harm the tree – just make it look ugly. There is no effective control of this insect.

I was not able to determine the problem with the elm as the sample was too small. However along with birches and maples we did see winter desiccation injury on elms due to the warm, dry conditions and this may be responsible for the dieback. Japanese elm has very few insect or disease problems in our state.